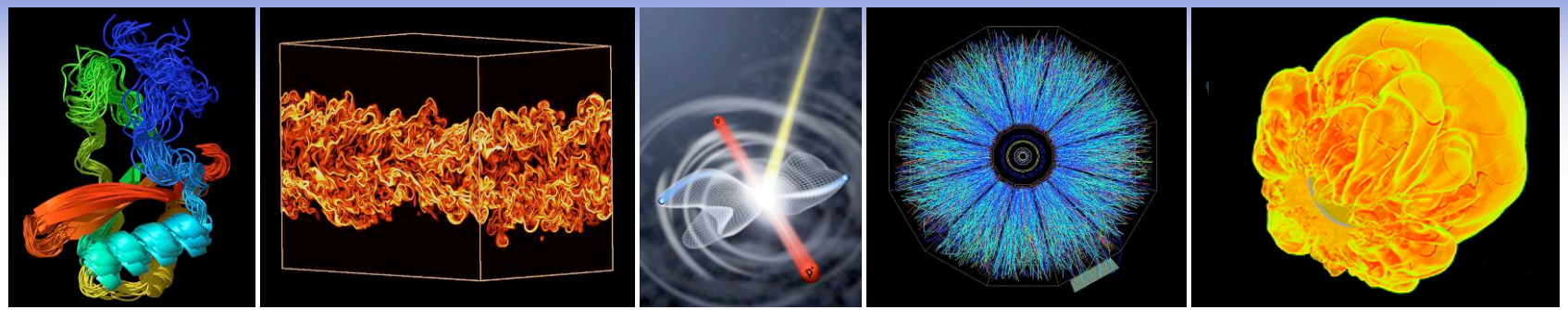

NERSC and ESnet
Web Development Project RFP
(CSWeb09)

Vendor Briefing

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U.S. DEPARTMENT OF ENERGY

NERSC

ESnet
Energy Sciences Network

BERKELEY LAB

NERSC Esnet RFP (CSWeb 09) Vendor Briefing

Goals

- Discuss requirements before RFP is released
- Clarify requirements ahead of time
- Explain RFP process

CSWeb09 RFP Page

All CSWeb09 RFP related contents can be found here:

http://www.nersc.gov/projects/procurements/CSWeb09/

High Level Site Goals

NERSC

- The website will highlight the science and technology at NERSC including public outreach for the center and in-depth coverage of science stories based on work being done at NERSC.
- The website will be a resource for NERSC users, providing technical documentation on NERSC systems, current system status, and resource usage.
- The website will effectively communicate current events and information about NERSC including sponsored events, lectures and presentations.
- The website will be the primary conduit for information sharing between NERSC and its users, Department of Energy program managers, High Performance Computing community and the general public.

ESnet

- The website will be the primary conduit for information sharing between ESnet and its users, ESnet and its Department of Energy program managers and ESnet and the general public.
- ESnet website will highlight the science and technology at ESnet, including public outreach and in-depth coverage of science stories based on the research enabled by the network.
- The website will be the primary conduit through which ESnet staff and the ESnet scientific user community access services and receive support.
- The website will serve as a central point of access to ESnet services and staff in real time.
- The website will be a resource for ESnet staff and its user community to attain real time resource utilization as well as more static information such as technical documentation, knowledge sharing, or archived data.
- The website will effectively communicate current events and information about the ESnet community - including sponsored workshops, lectures and presentations.

Minimum Requirements 1

- All developed software and software dependencies must be based on Unix-based open-source tools
- Website must support all major browsers including Firefox, IE and Safari
- Must support the ability to create and publish content and include management functionality for multiple users, including access controls and site management roles
- Must allow non-technical staff to publish content (news stories, articles, papers, slides, technical documentation and special event pages with registration) through a simple, polished web interface, without aid from technical staff.

Minimum Requirements 2

- Must be able to integrate with existing databases and backend applications including
  - NERSC resource usage database (interface with MySQL)
  - ESnet Network Monitoring and Virtual Circuit reservation applications (interface with web service APIs)
  - ESnet trouble ticket system (consume information from/post to Oracle based Remedy ticket system. Full integration is not required at this stage)
- Website must support user authentication based on LDAP (for NERSC site) and a Federated Identity framework such as OpenID or Shibboleth (for ESnet site)
- Software infrastructure must be designed to support redundancy so that there is no single point of failure at the hardware layer
- Must separate content from design

Minimum Requirements 3

- Must be able to develop a strong, consistent brand identity and enforce a consistent look and feel for each site.
- Must be able to support migration of current information content to new architecture.
- Must include integrated search functionality
- Delivered software must be easily extensible and maintainable for LBL staff so that LBL can take over management and maintenance of the site after delivery with minimal vendor support.
- Delivered system must be open and flexible, so that LBL can have the option of deploying other websites using this infrastructure.

Minumum Requirements Response

- The Offeror should include in its proposal:
  - A paragraph on each minimum requirement listed above describing how the proposed solution will meet that requirement

Performance Features - General

- Software built using the LAMP model.
  - FreeBSD or Linux
  - Apache
  - Backend Database (MySQL, PostGRESQL or other similar technology)
  - Content framework development language (PHP or Python preferred, other frameworks may be considered as well)
- Support for sub-domains or microsites for special projects
- Mechanism to import content from the existing sites
- Strong information architecture services to help NERSC and ESnet move existing content into improved navigation hierarchy
- Extensibility - ability to integrate with other web services or database applications in the future. Integration with these systems is not in the current scope of work for this project, but it is desirable to have a mechanism for extending the software framework so that it can be included by the client in the future
- Customer support services upon completion of the project

General Features - Response

The Offeror should include in its proposal:

- **A description of the proposed software system architecture including underlying dependencies.**
- **A description of the proposed content management software or a description of the process to determine the appropriate content management software based on customer needs.**
- **A proposal for how to incorporate other sub-domains or microsites under the overall umbrella site and brand identity.**
- **A well-defined process for importing existing content into the new system.**
- **Description of the development and discovery process that will be used to create an improved information architecture and user interface**
- **A brief description of the extensibility features of the proposed system, including links to more detailed documentation and programming interfaces.**
- **Description of customer support model during and after the project**

Performance Features - Systems

- **Maintainability of web software architecture**
  - A well-defined upgrade and patching mechanism that avoids custom fixes.
  - Well-documented code that follows strict coding standards.
  - Similar software architectures for NERSC and ESnet sites to facilitate code reuse and common software maintenance paths
  - Use of standard, proven and robust CMS code modules with existing community support and the use of custom solutions only where necessary
- **Integration into NERSC and ESnet back-end infrastructure**
  - Ability to access to a database that resides on separate node
  - Support for server level separation of read/write and read only access to content and support for secure authenticated access (https)
  - Ability to back up and recover the systems and the content separately
  - Ability to export content
  - Ability for proposed system software to be compatible with hardware redundancy (either through load balancing, redundancy and/or fail over including remote servers)
- **Secure software environment**
  - Commitment to delivering a system free from known bugs and security vulnerabilities
  - Well-defined patching mechanism for bugs and vulnerabilities
  - Features within the system to enhance the overall security of the software

Systems Features - Response

The Offeror should include in its proposal:

- **A description of the software maintenance practices for running the system including links to reference documentation.**
- **Demonstrated use of software engineering best practices for software development, systems administration, and integration of add-on modules.**
- **Description for how the two sites will be developed concurrently to maximize design and code re-use**
- **A brief description of how the software system will be integrated into the site back-end infrastructure**
- **Security track record of the proposed software system, including the number of critical vulnerabilities in the past year, and average time for patch release. Also include any security enhancements within the software and the system design.**

Performance Features - CMS/Software 1

- Support for content management features including
  - Well-defined page layouts and the ability to simply generate new templates
  - Ability to preview content before publishing
  - Ability for multiple users to be editing the same page, or a locking system which coordinates access and support for version control
  - Ability to allow users to share documents with other users of their choice
  - Customizable user profiles and personal user pages
  - User feedback interaction through commenting services and forums
  - Calendaring and conference/event creation tools
  - Tagging and sharing content to other social platforms (e.g.: SMS, Twitter, facebook) and RSS feeds for information content
  - Support for customizable views for users such as dashboards or widgets

Performance Features - CMS/Software 2

- Support for interactive front-end interfaces
- Support for AJAX and avoid use of Flash on any of the critical components of the site
  - Use of Google maps or similar interfaces where geographical data is displayed
  - Capable of rendering a basic html view for non-JavaScript browsers or mobile devices
- Use of web services APIs (e.g. REST) and URLs for access where possible
- Display current usage statistics and operational data for
  - System status, downtimes and maintenance windows
  - Live Resource usage statistics – network data and tickets (ESnet), job and storage (NERSC)
  - Support the ability for NERSC/ESnet staff to communicate with their users in real-time
- Pluggable authentication modules that can support
  - LDAP and federated identity authentication
  - Single sign-on across a domain

CMS/Software Features - Response

The Offeror should include in its proposal:

- **Description of which of the above content management features are supported and how**
- **Description of social, interactivity and user customization tools**
- **Description of how the proposed system provides authentication, authorization and Single-Sign On support including federated identity capabilities**

Supplier Attributes

- Demonstrated capability to develop the proposed solution and integrate it into the customer environment
- Successful performance on contracts in past 3 years similar in type and complexity as the proposed Subcontract
- Ability to interact and work well with technical clients
- Ability to provide effective training services and technology transfer to client
- Responsiveness to customer feedback during development cycle
- Prior experience with short iterative development cycles, flexible requirements, close customer feedback, and the ability to rapidly respond to feedback including weekly customer meetings and well-defined milestones to chart progress.
- Strong branding and user interface work
- Capability to provide support and perform additional development after the completion of the project
- Familiarity and experience with technologies mentioned in this proposal
- Management and corporate capability to develop the solution within project cost and schedule parameters

Supplier Attributes - Response

The Offeror should include in its proposal:

- List of sites designed and deployed by vendor
- Examples of prior deployments with similar back-end requirements as NERSC and ESnet
- Description of technology transfer and customer training process
- A description of project management approach
- Examples of prior branding and design work and process for developing brand/site design in conjunction with customer
- Description of the customer support model for bug fixes and additional work to be performed after completion of the project
- References from past customers for projects with similar scope. These may include public and private contracts. Include technical and business contact points by name, title, address, telephone number and, if available, e-mail address.
- Additional information to support above attributes

Price Proposal

- **The price proposal must include a total firm fixed price for the work. The proposal should also include invoicing requirements and payment terms. The Offeror may provide additional pricing options, alternative pricing structures and/or proposals for synergistic technologies that would add value to NERSC and ESnet.**

Offerors' Questions

NERSC and ESnet will respond to questions submitted in writing to the Procurement Representative on or before 5 days before the proposal due date. Questions submitted after this date may not be answered prior to the proposal due date. All questions shall be submitted to webrfp@nersc.gov. Answers to questions that are generally germane to the interpretation of the University's requirements will be posted to the website at:

http://www.nersc.gov/projects/procurements/CSWeb09

Proposed Backend Architecture